

Benjamin Haley
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Education

University of Illinois, B.S. in Honors Biology, 2005
School of Liberal Arts and Sciences, Champaign/Urbana, IL
Major G.P.A. 3.64/4.0

Relevant Coursework

Cellular Biology, Chemistry, Physics, Calculus, Statistics

Independent Study

Algorithms (Cormen), Discrete Mathematics (Rosen), Linear Algebra (Strang), Compilers (Aho), Computer Organization and Design (Patterson and Hennessey), and code Complete (Steve McConnell) supplemented by tutorials in encryption, networking, concurrency, and C++

Experience

Information Manager - Northwestern University | Chicago, IL | Aug 2008 – Present

Department of Radiation Oncology

- Deciphered and documented the study database from Argonne's Irradiated Dog Tissue Archives and migrated the relevant portions from Microsoft Access to MySQL
- Created a searchable [web portal](http://janus.northwestern.edu/dog_tissues/) for above archive and database using php and ajax (http://janus.northwestern.edu/dog_tissues/)
- Oversaw project to add remote backup, file sharing, and security administration on lab computers
- Currently working with Michael Gruenberger from the European Radiobiological Archives to translate the above archive terminology into Open Biomedical Ontologies to allow a cross search between our respective archives.
- Responsible for lab website maintenance

Technician - Northwestern University | Chicago, IL | Nov 2005 - Jan 2008

Department of Radiation Oncology

- Wrote a literature review on hnRNP and Ionizing radiation (citation below)
- Performed RNA-cleavage experiments and developed a centrifugation based separation technique with titanium dioxide nanocomposites
- Formalized protocols, trained, taught and supervised six students in cell culture, PCR, and rt-PCR
- Maintained PC-12 cell lines, media preparations, cryopreservation and cell counting
- Performed DNA, and RNA isolation, PCR and rt-PCR, and data analysis on tissues isolated from 'wasted' PCNA +/- mice to study DNA repair gene regulation pathways in response to ionizing radiation.
- Maintained mouse-facilities, ordered lab supplies, prepared lab for safety inspections, kept account of inventory and expenditures, performed machine maintenance and calibration, and oversaw major shipment and equipment installations.

Lab Assistant - University of Illinois | Champaign/Urbana, IL | Sept 2003- Aug 2005

Veterinary Medicine

- Assisted in research on circadian signal transduction between SCN cells
- Performed time trials of co-cultured cells, *in vitro*, using rt-PCR to characterize isolated mRNA expression profiles
- Tested for changes of cell proliferation/death rates, *in vitro*, in various sera using the MTT assay
- Isolated brain tissue slices of the SCN, genotyped and assisted in the handling of mice

Honors and Distinctions

National Honors Society Member (2000)
Deans List at University of Illinois (Spring 2005)

Publications

Benjamin Haley, Tatjana Paunesku, Miroslava Protić, & Gayle E Woloschak. Response of heterogeneous ribonuclear proteins (hnRNPs) to ionizing radiation and their involvement in DNA damage repair. *International Journal of Radiation Biology* 2:1-13, July 2009.

Eric M.B. Brown, Tatjana Paunesku, AiGuo Wu, K. Ted Thurn, **Benjamin Haley**, Jimmy Clark, Taisa Priester, Gayle E Woloschak. Methods for assessing DNA hybridization of peptide nucleic acid-titanium dioxide nanoconjugates. *Analytical Biochemistry* 383(2):226-235, 2008.

Barbara Szolc-Kowalska, Irka Templeton, Benjamin Haley, Angela Babbo, Tatjana Paunesku and Gayle E Woloschak. Expression of the Proliferating Cell Nuclear Antigen (PCNA) in Lymphoid Tissues of Radiosensitive "Wasted" Mice. *International Journal of Radiation Biology* 66(3):595-596 2006.

Kathleen Bottum, Emily Poon, Benjamin Haley, and Shelley A. Tischkau. Suprachiasmatic Nucleus Neurons Display Endogenous Resistance to Excitotoxicity. *Experimental Biology and Medicine* (submitted).

Abstracts and Poster Presentations (first author only)

Low Dose Radiation Research Investigators Workshop VIII (April 2009) Gamma-Irradiated Beagle Dog Tissue Archive. Benjamin Haley, David Paunesku, Tatjana Paunesku, Angela Babbo, Beau Wanzer, Tom Fritz, Christine Gerin, and Gaye Woloschak

Volunteer Efforts and Personal Interests

Team Coordinator | Chicago, IL | Summers 2006 & 2007

Chicago Cares and Friends of River, Lathrop River Garden Project – river cleanup and beautification

Adventurer | San Diego, CA - Fort Bragg, CA | April 2008 – July 2008

Bicycle trip up the coast of California

Volunteer Teacher | Chicago, IL | 2008/2009 School Year

Chicago Cares, Just Click Here at KIPP – a web development course for 6th-8th graders

Tutor | Chicago, IL | Fall 2009

Open Books, Perspectives Charter School – After school study tutor

References

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|------------------------|--|
| Gayle Woloschak | Northwestern University – Professor, Radiation Oncology (630) 842-5060 - g-woloschak@northwestern.edu |
| Tanja Paunesku | Northwestern University – Assistant Professor, Radiation Oncology (630) 842-5062 - tpaunesku@northwestern.edu |